

IN THE DRAWINGS

Applicants enclose an Annotated Sheet for Fig. 10 illustrating a correction thereto.

Applicants also enclose a Replacement Sheet for Fig. 10 reflecting the correction.

REMARKS

Claims 1-16 are pending in the application. Applicants amend the specification and drawings for minor corrections, and amend claims 1-3, 7-10, and 14-16 for clarification. No new matter has been added.

Applicants respectfully request that the Examiner indicate acceptance of the drawings, and acknowledge with appreciation the Examiner's finding that claims 4 and 7-10 contain allowable subject matter. Applicants respectfully submit that claim 1, from which claims 4 and 7-10, is patentable over the references cited against it, as demonstrated below. Accordingly, Applicants request that the Examiner also allow claims 4 and 7-10.

The Examiner objected to the abstract for being more than one paragraph. Applicants amend the abstract to correct the paragraph structure and the legal terminology, and respectfully request that the Examiner withdraw the objection.

Claims 1-3 and 11-16 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,509,872 to Ishii et al. in view of Applicants' Admitted Prior Art ("AAPA"); claim 5 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Ishii et al. in view of AAPA, and further in view of U.S. Patent Application Publication No. 2002/0085653 to Matsuoka et al.; and claim 6 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Ishii et al. in view of AAPA, and further in view of U.S. Patent No. 7,006,553 to McCorkle. Applicants amend claims 1-3, 7-10, and 14-16 in a good faith effort to clarify the invention as distinguished from the cited references, and respectfully traverse the rejections.

The Examiner relied upon the description of antennas and adaptive receivers in Ishii et al. as alleged disclosure of the claimed antenna elements and adjustment units. The Examiner also relied upon the description of extracting information from received signals in the background

section of Ishii et al. as alleged disclosure of the claimed interference wave element extraction unit. The Examiner conceded that Ishii et al. do not disclose extracting an interference wave element when an adjustment value of an adjustment unit is perturbed in a 1 symbol time. The Examiner relied upon Fig. 4 in the application as alleged AAPA that suggests this feature.

Ishii et al., in the background section thereof, merely describe the general configuration of a communications apparatus using an adaptive antenna having a plurality of antennas 1-1, ..., 1-N and a plurality of adaptive receivers 3-1-1, ..., 3-M-1, each of which adaptively controlling weight. Meanwhile, Fig. 4 of the present application, relied upon by the Examiner as AAPA, illustrates an example in which a single adjustment value—for example, a single variable reactance value corresponding to a single antenna—is perturbed in one symbol time.

Thus, even assuming, arguendo, that it would have been obvious to one skilled in the art at the time the claimed invention was made to combine Ishii et al. and AAPA, such a combination would have at most suggested a communications apparatus where,

“when there are M no-feed antenna elements, an M-symbol time is required to perturb them, and also 1-symbol unperturbed data is required for evaluation of perturbation. Therefore, a total of M+1 symbol time is required to update the variable reactance value of the antenna.” Page 7, lines 13-19 of the specification.

In other words, such a combination would still have failed to disclose or suggest,

“[a] communications apparatus using an adaptive antenna having in a high frequency unit an antenna unit including a plurality of antenna elements and a plurality of adjustment units provided corresponding to the plurality of antenna elements for adjusting directivity of an entire antenna, comprising:

an interference wave element extraction unit extracting an interference wave element other than a requested signal to be received by said communications apparatus from a received signal by the antenna unit when adjustment values of the plurality of adjustment units are perturbed in a one symbol time used in said communications apparatus; and

an adaptive control unit performing adaptive control on the adjustment value such that the extracted interference wave element can be minimized,” as recited in claim 1. (Emphasis added)

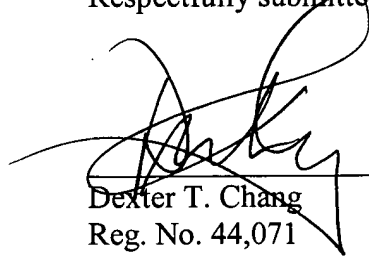
Accordingly, Applicants respectfully submit that claim 1, together with claims 2-3 and 11-15 dependent therefrom, is patentable over Ishii et al. and AAPA, separately and in combination, for at least the foregoing reasons. Claim 16 incorporates features that correspond to those of claim 1 cited above, and is, therefore, patentable over the cited references for at least the same reasons. The Examiner relied upon Matsuoka et al. and McCorkle as combining references to specifically address the additional features recited in dependent claims 5 and 6, respectively. As such, the further combinations of these references would still have failed to cure the above-described deficiencies of Ishii et al. and AAPA even assuming, arguendo, that such further combinations would have been obvious to one skilled in the art at the time the claimed invention was made. Accordingly, Applicants respectfully submit that claims 5-6 are patentable over the cited references for at least the above-stated reasons.

Applicants appreciate the Examiner’s implicit finding that the additional references made of record, but not applied, do not render the claims of the present application unpatentable, whether these references are considered alone or in combination with others.

In view of the remarks set forth above, this application is in condition for allowance which action is respectfully requested. However, if for any reason the Examiner should consider this application not to be in condition for allowance, the Examiner is respectfully requested to telephone the undersigned attorney at the number listed below prior to issuing a further Action.

Any fee due with this paper may be charged to Deposit Account No. 50-1290.

Respectfully submitted,



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Docket No.: FUJO 20.845 (100794-00530)

DTC:bf

Annotated Sheet

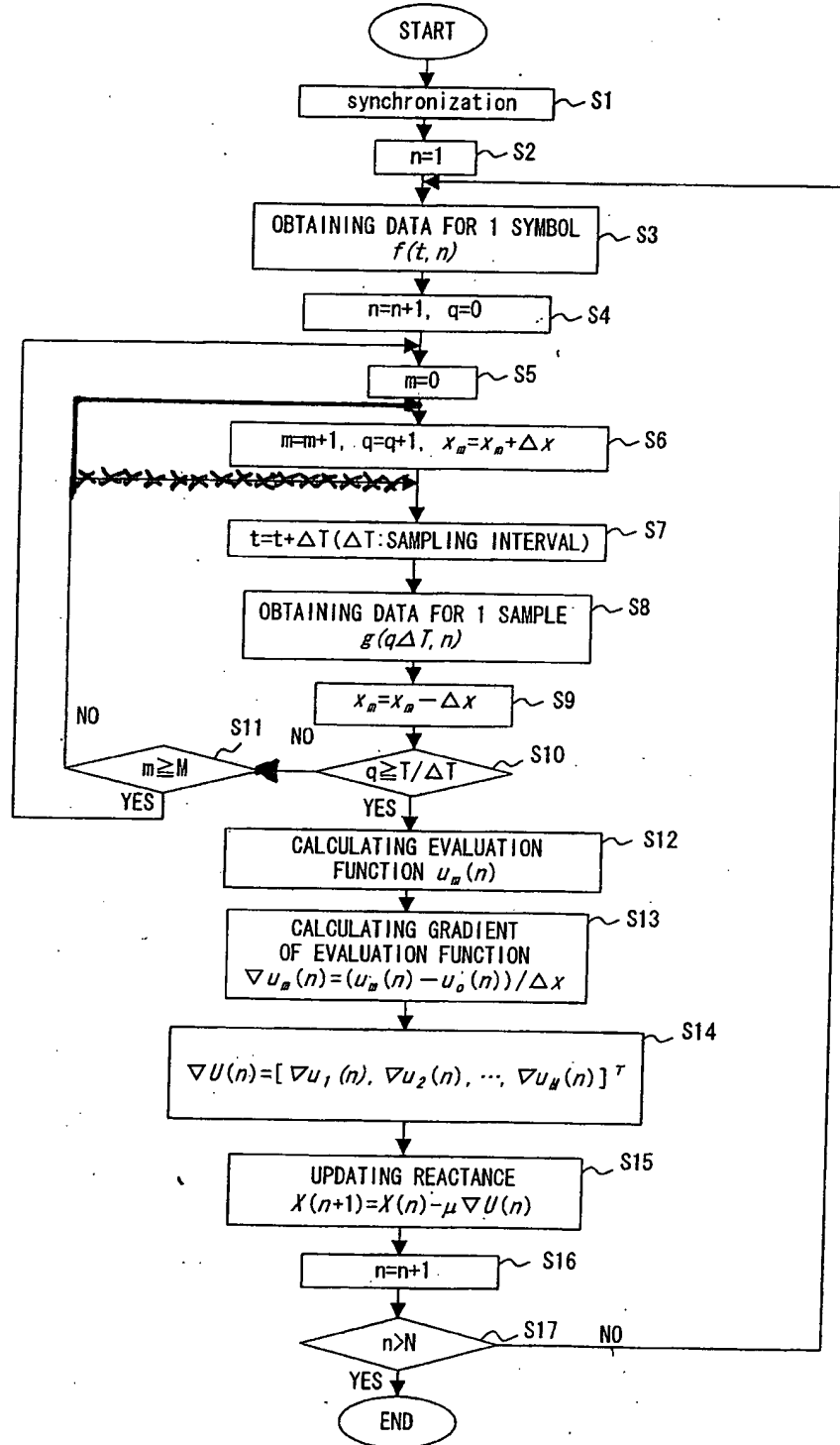


FIG. 10